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A DaimlerChrysler Company

What is a NEV?

[Neighborhood Electric Vehicle]

- Brand new category of vehicle recognized by NHTSA in 1998
- Over 8,000 NEVs in use today
- Street legal in 30+ states
- Major players are entering market

What is a NEV? (cont.)

- Pure electric vehicle (zero local emissions)
- Meets FMVSS 500 federal safety regulations
- Variety of configurations (2/4 passenger, utility, custom)
- Legal on all road posted to 35 mph
- Speed limited to 25 mph

What is a NEV? (cont.)

- “The Missing Link” in the move to alternative transportation
- “The Answer” to reduce urban congestion because of their size
- “A Pollution Killer” because it is a zero emission vehicle eliminating cold starts of internal combustion engines

What it is not

- A golf cart (faster, safer, designed as an on-road vehicle)
- A replacement for a car or truck (but it can replace the trips many cars and trucks take)
- A vehicle that you have seen before
- An unproven vehicle (more than 8,000 are on the road today)

Why NEVs work

- Highly functional vehicle
- People mover
- Goods mover
- Maintenance
- Security
- Emergency vehicle

The NEV value:

- Zero emission vehicle
- Eliminates critical cold start emissions
- Low Maintenance
- Quiet
- Affordable
- Ample power (from high-torque electric motor)
- Easy on-board charging system (110-volt household current)
- Eligible for federal tax credit
- Major automaker support

NEV Safety Equipment

- Head Lights
- Tail Lights
- Directional Signals
- Parking Brake
- Side View Mirror
- Rear View Mirror
- Horn
- Driver and Passenger Seat Belts
- High-mounted Brake Light
- Windshield
- Windshield Wiper

NEV Challenges

- New type of vehicle
- New approach to transportation
- Focused use rather than general use vehicle
- Education on NEV functionality needed

NEV's Role

Dr. Alan Lloyd, Chairman
California Air Resources Board

- In many applications, NEVs are already cost-effective
- The key is don't build in or buy more capability than is needed for vehicle mission
- Fit niche applications

October 11, 2001 "Environmental Solutions Summit"

EPACT for

Neighborhood Electric Vehicles

- **Fleet Use Study**
- **Vehicle Testing**
- **Legislation**

NEV Fleet Study (DOE - June 2001)

- Studied 15 fleets with 348 NEVs
- 91% of NEVs had no problems
- Users had positive experience with NEVs
- Est. 29,195 gallons of petroleum saved annually
- 775 pounds of smog-forming pollution saved annually
- The contribution NEVs make to decreasing petroleum use and air emissions, the Program has initiated NEV testing.

Field Operations Program

<http://ev.inel.gov/fop/>

While NEVs were initially used in gated communities, they have been increasingly used by the general public for transporting kids to school, shopping, and general neighborhood trips. NEVs are very cost-efficient, in terms of initial capital costs, fuel costs, and overall operating expenses.

In addition to the above uses,

- Many federal, private, and public fleets are increasingly using NEVs at military bases, national parks, commercial airports, and for local government activities.
- NEVs are reducing petroleum use and simplifying fueling requirements by decreasing or eliminating the need for gasoline infrastructure.
- For federal fleets, NEVs can help the fleets comply with Executive Order 13149 (Greening The Government Through Federal Fleet and Transportation Efficiency); which requires a 20% decrease in annual petroleum use by fiscal year 2005.

Neighborhood Electric Vehicle Testing:

- The Field Operations Program developed test procedures for new classes of pure electric vehicles.
- Testing these classes of vehicles requires the modification of the existing EVAmerica test procedures in areas such as coast-down testing and drive-cycle testing.
- These vehicles also required the development of new performance goals, as the use for these vehicles will be different than originally envisioned for full-size electric vehicles.

NEV Vehicles Tested

- 4-GEMS
- 2-Think Neighbor
- 2-Par Car
- 2-Frazer-Nash

SENATE VERSION OF THE ENERGY POLICY ACT OF 2002 (H.R. 4)

Neighborhood Electric Vehicles

Allows neighborhood electric vehicles to be used by federal, state and alternative fuel providers to satisfy their Energy Policy Act acquisition requirements.

Why do we know this?
Who are we?

Global Electric Motorcars, LLC
of Fargo, North Dakota
A DaimlerChrysler Company

*The leading producer of neighborhood
electric vehicles in the world*

Global Electric Motorcars

A DaimlerChrysler Company

since December 2000

- World leader in electric vehicles
- Founded in 1997
- First vehicle in 1998
- Over 8,000 EVs sold
- Most experienced company in the market

Four basic models

- 2-passenger
- 4-passenger
- Short-bed utility
- Long-bed utility

Special Use Versions

- Ambulances
- Security vehicles
- Others

Plus custom
configurations



Where GEMs are working right now

- Grand Canyon National Park
- Luke AFB

(saved \$120,000 in fuel and maintenance costs last year)

- Arizona State University
- America West Airlines/Southwest Airlines
- Motorola
- DC Ranch/Disney's Celebration

Drive one to be convinced

- I challenge you to test drive in a GEM
- You will be surprised and the vehicle's functionality will become clear
- You will see what a fun, functional vehicle it is

Conclusion

- Neighborhood electric vehicles are here to stay; they are not a short-term fix
- They are a new type of vehicle and will find new roles in our transportation mix
- NEVs represent a new approach to personal and corporate transportation
- Focused use rather than general use vehicle
- Uses grow and expand after purchase

Thank you!

Jim Ramstad

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for the America's leading manufacturer and
retailer of electric vehicles

www.gemcar.com/888-871-4367

- Questions?